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ABSTRACT

A key element in the completion of study by off-campus students is support during their learning. The nature of off-campus study renders nearly impossible the face-to-face contact which provides expansion of lecture material, direct answers to problems, guidance on procedures, and immediate responses to learning difficulties. Electronic mail offers an alternative means of providing support and enriching the learning process for off-campus students. Two hundred off-campus students were surveyed to determine access to equipment, response to possible student support services, knowledge of e-mail, and willingness to meet associated financial costs. Of the 98 respondents, 54 had a computer at home, but only five owned a modem. A high proportion of respondents acknowledged the usefulness of suggested e-mail services, but apart from the possibility of interacting with a tutor, most were not prepared to pay for the services. Forty-eight respondents knew what electronic mail was, and one respondent subscribed to a commercial network. Of all respondents, 46 would be prepared to purchase or rent a modem and/or software, but did not want to invest a large sum of money. It would be inappropriate to develop an electronic student support system if some students were disadvantaged by lack of means to access the system, particularly if the support system superseded existing systems. (Contains 15 references.) (SWC)

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The Use of Electronic Mail to Support Off-Campus Student Learning

by Allan Doring

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THE USE OF ELECTRONIC MAIL TO SUPPORT OFF-CAMPUS STUDENT LEARNING[1]

Allan Doring

Support during their learning is often a key element in the completion of study by off-campus students. Electronic mail offers an alternative means of providing support. This pilot project in reporting the findings from a survey of two hundred off-campus students provides data that suggests using electronic mail in this way, is not without difficulties.

INTRODUCTION

The importance of support during their learning for the remote or isolated student has been well recognised, for example, Wilson (1994) and Wright (1994). Providing quality support has particular benefit for both student and institution by increasing student success rate and reducing student attrition. However, to ensure such benefits continue, further possibilities need to be explored.

Attempts to improve student support have included such alternatives as residentials, tele-conferences, local visits, and video-conferencing, in an effort to offer forms of tutorial support similar to those available to on-campus students. By the very nature of off-campus study, the "face-to-face" contact which provides expansion of lecture material, direct answers to problems, guidance on procedures and immediate responses to learning difficulties is absent or highly infrequent. Students also desire to have contact with fellow students to feel part of a group, to be able to discuss problems, to take part in group work and to benefit from peer support (McGregor & Latchem, 1991:41; Wright, 1994:59). One possibility that offers the opportunity to improve the interpersonal contact and hence learning support is that of using electronic networks, in particular, electronic mail (e-mail).

Reports in the Australian press claim that many Australians, with modems attached to their home computers, are now becoming avid users of the Internet. Other networks are also being increasingly used, for example, universities have access to the university system AARNet[2], the government Telecom network, Keylink, used by many schools and the Queensland Open Learning Network[3]. While the spread of these networks is acknowledged, the extent of the usage is difficult to identify.

The author was keen to explore the possibility of using available electronic networks as a means of providing an alternative form of support between geographically dispersed participants,

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[1]An earlier version of this paper was presented at the 12th Biennial forum of the Open and Distance Learning Association of Australia, Vanuatu, September, 1995.

[2]Australian Academic Research Network

[3]Queensland Open Learning Network (OLN) is a network of study centres established by the state government providing student support through various resources including access to electronic mail.

unbounded by time and availability as required by the telephone. The use of e-mail was envisaged as providing an alternative format for personal contact particularly for those students experiencing difficulty with their study.

The caution warranted in establishing such a form of support has been argued elsewhere (Hansen and Gladfelter, 1995). It is sufficient to note at this point, that the use of any educational technology has inherent strengths and weaknesses for both provider and user.

BACKGROUND

Off-campus students are aware that they are disadvantaged in various respects by their method of study. Wilson (1994:271) suggests that they would be responsive to any change in teaching strategies that would increase the quality of their learning experiences. As mentioned earlier, there is a strong view that student support, with a need for direct human support, is crucial to successful independent learning (Tierney, 1994:110). Despite recognition as an area requiring priority research attention, a recent study by Jegede (1994) reports very limited research into student support services. This point is reinforced in the recent Inquiry into Open Learning in Australia where the matter of the quality of student support systems receives one brief paragraph of nine lines (Tierney, 1994:63).

While there is variety in the forms of student support systems, the objective of student support is normally construed as the individualising of the academic offering to the student. It is often the case that those involved in student support act as intermediaries between the course content and the student. E-mail, by its very process, is well poised to take a role in this mediation. It is individual, flexible and rapid. Through it, discussion can move closer to on-campus, classroom reality. The use of e-mail can offer substantial benefits - to help modernise course delivery, improve quality and enrich student's teaching and learning experiences (Stewart, 1992:13).

As always with technology, there is the question of access, availability and reliability, factors emphasised at length by Healy (1992) and Bates (1994). Bates (1994), in referring to a survey by Black, notes that while many students do not have access to computers or modems, this is becoming less of an issue. While Black's study is Canadian, Prebble (1993) reported similar trends in New Zealand. Australia is certain be likewise. These are key matters in attempting to establish a student support system.

Other factors also impinge, for example, cost-effectiveness and level of interaction. While AARNet is "free" to university staff at the moment, the student is more likely to need access to and be a subscriber to, a private network - which costs. The cost associated to interact with one's lecturer as well as other students, needs to be balanced with the perceived effectiveness, level of the resulting interaction and end benefit. Some students are likely to be reluctant to meet any on-line costs to become involved in mundane matters, "junk mail" or have inquiries unanswered within a reasonable time. There is a "hidden" cost for the institution in terms of the time necessary for the interaction although this is estimated to be less than for direct interaction (Tierney, 1994).

Gooley and Towers (1993:194) in referring to the operation of the Open Learning Network in Queensland, take this point further. They note that, while interactive electronic technologies can contribute to the quality of education for all learners,

> *systems are expensive and not usually cost effective for individuals to access, providers to establish multiple sites, or economically viable for rural and remote areas. Apart from large upfront capital costs and ongoing communications and staffing costs, there is a prudent requirement to set aside considerable recurrent funds for maintaining and upgrading hardware and software.*

In exploring the use of e-mail for student support, cognisance must be given to the advantages and disadvantages of the associated technology. Pebble (1993:156) made the valid point that the providers should not commit themselves to a service that will be out of reach of the average student who may be taking one or two courses on a part-time basis. For the individual student, e-mail software may not be easy to access and may involve mastery of new technical, social and communication skills (Anderson, 1994:10).

Nevertheless, the enthusiastic student is more likely to favour the interaction despite the cost. The resulting interactions are highly likely to add an extra-curricular dimension and new opportunities (Miller, 1992:28), for example, being empowered to the possibility of becoming a real part of a community of scholars, unbounded by the restraints of time and distance (Anderson, 1994:9). For an isolated student completing a single twelve-week unit, it may not be worth the effort despite the advantages espoused by an enthusiastic provider. While e-mail can offer particular benefits, it must be remembered that it cannot replace entirely the complex interactions characterising the teaching-learning process evident in face-to-face learning situations (Jakupec and Nicoll, 1994:217).

PROJECT

Prior to beginning to attempt to establish a student support network using electronic mail, it was deemed necessary to gain some knowledge of what equipment students had access to, an understanding of possible uses in student support, knowledge of e-mail and their willingness to meet any financial cost. To gain this information, a survey was conducted.

METHODOLOGY

A questionnaire containing twenty-one questions was posted to two hundred off-campus students located across four states of Australian. The students were randomly selected from current student enrolments. A reply paid envelope was provided as a means of increasing the return rate.

Ninety eight questionnaires were returned (22 male, 76 female). As this was a pilot project, no attempt was made to follow up non-returns to increase the return rate.

As with any pilot project, the reliability and validity of the instrument at this point was not established.

Through structured questions, the survey explored four areas identified earlier. For researcher interest, location as identified through postcode and gender were also sought.

RESULTS AND DISCUSSION[4]

The pilot analysis examined only the frequency of responses across all questions. While the survey did not provide a large data set, it produced some interesting preliminary indicators.

Computer equipment

Six questions dealt with the matter of equipment. Fifty-four respondents indicated they had a computer at home, either an IBM PC or compatible (22), Apple Mac (30) or other not identified (2). Of this same group, forty-seven said their computer took 3½" disk, while two said 5¼". The remaining five did not know the size of their disk.

Of the respondents with computers, five indicated they had a telephone modem. Among them, the e-mail software in use included Microsoft Mail, ProCom, Lotus Notes and Quick Mail.

In terms of access to equipment to use e-mail as a means of student support, this low level of equipment indicates that any project based on a high anticipation of equipment is unlikely to succeed.

Use in student support

Possible uses of e-mail in student support was gauged through a question using a similar format as used by Deakin University (1993:54). Table 1 indicates the preferred choice of services that could be provided using e-mail:

Service delivered by E-Mail	Would likely pay to use this service	A useful service, but would not pay to use	Not useful, and would not use
Interaction with tutor re study materials	46	47	5
Advice re courses, enrolment, etc.	11	55	32
Interaction with lecturer re study problems, etc	21	54	23
Feedback from tutor on assignments	37	56	5
Advice on library resources from university library	26	62	10
Placing an order for an item available in a university library	26	61	11

Table 1. Preferred choice of services available through e-mail.

[4]With the low return rate, raw numbers are given rather than percentages which tend to distort the results.

As seen in this table, a high proportion of respondents acknowledged the usefulness of the six suggested services that could be delivered. However, apart from the possibility of interacting with a tutor, many were not prepared to pay.

Knowledge of e-mail

Of all the respondents, forty-eight indicated that they were aware of what electronic mail was. Of this group, twenty-six reported that they had access to the Telecom system *Keylink*, either through their school or through an Open Learning Centre (in Queensland). Four indicated they only had access through an Open Learning Centre. The remainder indicated that they either had no access to Keylink or did not know what it was. Of those with access to Keylink, only four indicated it would be available for use to interact with others while five were unsure. Of the group who indicated they would have access, only three were comfortable with using it to interact with the researcher and other students. Only one respondent subscribed to a commercial network.

From the responses, it appears that the knowledge of e-mail among these students is not high. For some, while the technology is available, its use is likely to be limited.

Cost

Following on from the earlier question, the matter of cost was raised in two questions. Of all the respondents, forty-six indicated they would be prepared to purchase or hire a modem and/or software. However, when it came to an actual cost, Table 2 indicates their cost preferences:

$25	$50	$75	$100	$125	$150
58	28	2	6	3	1

Table 2. Preferred cost options.

While many preferred minimum cost, the preferred amount suggests that hiring is probably the best option for the provider.

SUMMARY

In terms of the possibility of using e-mail as a means of providing one form of student support, this project produced disappointing outcomes. While the number of respondents was small, there is a strong indication that the availability of suitable technology, knowledge of e-mail, appreciation of its potential uses and preparedness to meet associated costs, are limited.

At the same time, the results provide a sober comment to the enthusiasts who claim that learners are ready to be involved in this form of support. Rather, it seems that considerably more work is needed, not only to educate the off-campus learner, but also to examine the infrastructure within one's institution as to the feasibility and possibility of the limited provision of certain equipment, for example, modems. While some institutions, for example, Central Queensland University, have already explored such alternatives, it is obvious that further work is required.

This is even more critical if all students are unable to have equal access. It would be totally inappropriate to develop an electronic student support system if some students were disadvantaged due to lack of the necessary means of accessing learning experiences enjoyed by others particularly if this support system superseded existing systems. Nevertheless, electronic mail does offer substantial benefits in enriching the learning process for the off-campus student.

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